## AMENDMENTS TO THE SPECIFICATION

**Page 1, between the title and paragraph 1, insert and center**

BACKGROUND OF THE INVENTION.

**Page 1, paragraph 5 (spanning pages 1 and 2), delete in its entirety, and replace with the following:**

The C/A PRN code (pseudo random noise) of each satellite, which is also called the Gold code, is ~~an~~ a unique pseudo random code for each satellite so that the signals transmitted by the satellites can be differentiated within the receiver. All the Gold codes have the characteristic of being orthogonal, i.e. by correlating them with each other, the correlation result gives a value close to 0. This characteristic allows several radio-frequency signals originating from several satellites to be processed independently and simultaneously in several channels of the same GPS receiver.

**Page 2, third full paragraph, delete in its entirety, and replace with the following:**

In the GPS receiver at the correlation stage, a C/A code generator generates a known replica of a C/A satellite code by a sequence of 1023 different chips for each phase ~~adjustement~~ adjustment for acquiring a satellite. The chip codes are offset in time in a shift register implementation by orienting the clock which controls said shift registers.

**Page 2, sixth full paragraph, delete in its entirety, and replace with the following:**

Of course, the consumption requirements are dependent on the capacity of the supply battery to supply power to the GPS receiver when the received radio-frequency signals are processed. The smaller the battery, the more necessary it becomes to design smaller integrated

circuit electronic units for the GPS receiver. Further the manner in which the signals are processed in said circuits to extract the GPS message and the pseudo-ranges from each satellite picked up have to be processed in an optimal ~~manner~~manner.

**Page 4, between the second and third full paragraphs, insert and center**

SUMMARY OF THE INVENTION.

**Page 6, between the first and second full paragraphs, insert and center**

BRIEF DESCRIPTION OF THE DRAWINGS.

**Page 6, between the seventh and eighth full paragraphs, insert and center**

DETAILED DESCRIPTION OF THE INVENTION.

**Page 9, fifth full paragraph, delete in its entirety, and replace with the following:**

Controller 9 of each channel includes, amongst other things, a memory unit, an arithmetical unit, a data bit synchronisation unit, a correlator control unit and an interruption unit which are not visible in Figure 1. The memory unit is formed, in particular, of a RAM memory for storing momentary data. The RAM memory is distributed in a ~~non-regular~~ non-regular or regular structure. The arithmetical unit performs addition, subtraction, multiplication, accumulation and shift operations.

**Page 10, sixth paragraph (spanning pages 10 and 11), delete in its entirety, and replace with the following:**

At the output towards the microprocessor from the buffer register stage 11, the one single bit GPS message is at a frequency of 50 Hz which allows a lot of energy to be saved. From the point of view of the gain obtained with this redistribution of the synchronisation tasks,

the transfer of data between each correlation channel and the microprocessor is up to 3 orders of magnitude lower with respect to the GPS receivers of the prior art, since it is no longer necessary to transfer the energy and numerically controlled oscillator NCO increments for each epoch.

**Page 13, fifth full paragraph, delete in its entirety, and replace with the following:**

With reference to Figure 2, the IF signal is multiplied by the cosine minus i times the sine of the replica of the internally generated carrier in multiplier 21 and by the minus sine minus i times the cosine of the replica of the internally generated carrier in multiplier 22. These signals (Cos-iSin) and (-Sin-iCos) originate respectively from ~~an~~ a unit 45 and ~~an~~ a unit 46 of a table of the replica signal. The purpose is to extract actually the carrier frequency from the signals carrying the GPS message.

**Page 16, fourth full paragraph, delete in its entirety, and replace with the following:**

Since it is possible for the radio-frequency signals to be interrupted due to an obstacle, ~~a~~ an interruption check 107 is performed. If the interruption instruction is at 0 in a normal operating case, a comparison of the energy level 108 to a threshold value is made. If the energy is not sufficient, there is a phase lag of the C/A code 109 and the number K of cycles is reset to 1 to be able to make a new correlation of the generated C/A code corrected with the intermediate signal in order to find the equivalent of the C/A code transported by the intermediate signal.

**Page 17, second full paragraph, delete in its entirety, and replace with the following:**

During step 107, if an interruption of the RF stage is imposed, i.e. if the interruption instruction is equal to 1, an ~~incrementation~~ increment of the number of cycles is performed at step 113. A check of the number of cycles occurs at step 114. As long as the number of cycles is

not equal to 16, steps 104, 105, 106, 107, 113 are repeated. As soon as the number of cycles is equal to 16, the counter of number of cycles 115 is set to 1 and the energy calculated from values $I_{ES}$, $I_{LS}$, $Q_{ES}$ and $Q_{LS}$, at step 116 is compared to an energy threshold. If this energy is below the reference threshold, steps 104, 105, 106, 107, 113, 114 and 115 are repeated until the energy is higher than the reference threshold. At step 117, the interruption instruction is set to 0 and the tracking instruction is set to 1.

**Page 18, first and second full paragraphs, delete in their entirety, and replace with the following:**

In step 125, a test is made to find out whether the satellite had been detected previously. In the affirmative case, increments are established in the coasting loop in order to try to find the lost satellite. Conversely, if the satellite had not yet been detected, the increments of loops 127 are reset and the system continues to search for a satellite. From step ~~125~~ 126 and step 127, a return to step 103 occurs.

All the operations of the finite state machine (FSM) performed by the channel in acquisition and tracking phase are achieved autonomously by the co-operation of the controller and the correlator with the control loops in a bit-parallel architecture. The state machine includes 32 calculating and value storage positions to accomplish all the procedures during acquisition and tracking of a satellite.

**Page 18, fourth full paragraph, delete in its entirety, and replace with the following:**

A GPS receiver is mounted in the watch case. This GPS receiver is formed of an antenna for example a micro-strip antenna 71 for receiving satellite radio-frequency signals mounted on a

printed circuit board ~~71~~ 70 on which are placed on the opposite side components 72 of said receiver. The components 72 are protected by a shielding 73 and are powered by a Li-ion accumulator 74 positioned under printed circuit board 70 in middle part 62. A charge coil of accumulator 75 is placed on the bottom of the middle part to be able to be magnetically coupled to an external device, not visible in Figure 5, allowing the accumulator to be charged.